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<212> DNA

<213> Homo Sapien

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- Phe Asp Leu Asp Arg Gln Ser Gly Gln Cys Leu Asp Ile Asp Glu 35 40 45
- Cys Arg Thr Ile Pro Glu Ala Cys Arg Gly Asp Met Met Cys Val 50 55 60

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Pro	Tyr	Pro	Ala	Ala 95	Ala	Pro	Pro	Leu	Ser 100	Ala	Pro	Asn	Tyr	Pro 105
Thr	Ile	Ser	Arg	Pro 110	Leu	Ile	Cys	Arg	Phe 115	Gly	Tyr	Gln	Met	Asp 120
Glu	Ser	Asn	Gln	Cys 125	Val	Asp	Val	Asp	Glu 130	Cys	Ala	Thr	Asp	Ser 135
His	Gln	Cys	Asn	Pro 140	Thr	Gln	Ile	Cys	Ile 145	Asn	Thr	Glu	Gly	Gly 150
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Asp	Gly	Val	His	Cys 245	Ser	Asp	Met	Asp	Glu 250	Cys	Ser	Phe	Ser	Glu 255
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Cys	Ser	Cys	Pro	Pro 275	Gly	Tyr	Ile	Leu	Leu 280	Asp	Asp	Asn	Arg	Ser 285
Cys	Gln	Asp	Ile	Asn 290	Glu	Cys	Glu	His	Arg 295	Asn	His	Thr	Cys	Asn 300
Leu	Gln	Gln	Thr	Cys 305	Tyr	Asn	Leu	Gln	Gly 310	Gly	Phe	Lys	Cys	Ile 315
Asp	Pro	Ile	Arg	Cys 320	Glu	Glu	Pro	Tyr	Leu 325	Arg	Ile	Ser	Asp	Asn 330
Arg	Cys	Met	Cys	Pro 335	Ala	Glu	Asn	Pro	Gly 340	Cys	Arg	Asp	Gln	Pro 345
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Met Thr Arg Pro	Ile Lys Gly Pro	Arg Glu Ile Gln	Leu Asp Leu
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Pro Gly Phe Pro Ala Asn Val Thr Thr Leu Ser Leu Ser Ala Asn 50 55 60

Arg Leu Pro Gly Leu Pro Glu Gly Ala Phe Arg Glu Val Pro Leu
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Leu Gln Ser Leu Trp Leu Ala His Asn Glu Ile Arg Thr Val Ala 80 85 90

Ala Gly Ala Leu Ala Ser Leu Ser His Leu Lys Ser Leu Asp Leu
95 100 105

Ser His Asn Leu Ile Ser Asp Phe Ala Trp Ser Asp Leu His Asn 110 115 120

Leu Ser Ala Leu Gln Leu Leu Lys Met Asp Ser Asn Glu Leu Thr
125 130 135

Phe Ile Pro Arg Asp Ala Phe Arg Ser Leu Arg Ala Leu Arg Ser 140 145 150

Leu Gln Leu Asn His Asn Arg Leu His Thr Leu Ala Glu Gly Thr
155 160 165

Phe Thr Pro Leu Thr Ala Leu Ser His Leu Gln Ile Asn Glu Asn 170 175 180

Pro Phe Asp Cys Thr Cys Gly Ile Val Trp Leu Lys Thr Trp Ala 185 190 195

Leu Thr Thr Ala Val Ser Ile Pro Glu Gln Asp Asn Ile Ala Cys 200 205 210

Thr Ser Pro His Val Leu Lys Gly Thr Pro Leu Ser Arg Leu Pro 215 220 225

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Gly	Lys	Met	Ala	Pro 65	Phe	Thr	His	Asp	Phe 70	Arg	Lys	Ala	Gln	Glr 75
Arg	Met	Pro	Ala	Ile 80	Pro	Val	Asn	Ile	His 85	Ser	Met	Asn	Phe	Thr 90
Trp	Gln	Ala	Ala	Gly 95	Gln	Ala	Glu	Tyr	Phe 100	Tyr	Glu	Phe	Leu	Ser 105
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Gln	Thr	Pro	Gln	Asn 170	Ala	Ile	Phe	Phe	Lys 175	Thr	Cys	Gln	Gln	Ala 180
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Lys	Ala	Leu	Cys	Thr 215	Pro	Arg	Cys	Met	Asn 220	Gly	Gly	Leu	Cys	Val 225
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Cys	Phe	Tyr	Pro			Cys				Pro				Gly 270
Glu	Gln	Cys	Glu	Ile 275	Ser	Lys	Cys	Pro	Gln 280	Pro	Cys	Arg	Asn	Gly 285
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Ala	His	Gly	Thr	Cys	His	Glu	Pro	Asn	Lys	Cys	Gln	Cys	Gln	Glu

320 325 330

Gly Trp His Gly Arg His Cys Asn Lys Arg Tyr Glu Ala Ser Leu 335 340 345

Ile His Ala Leu Arg Pro Ala Gly Ala Gln Leu Arg Gln His Thr
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<210> 23

<211> 783

<212> DNA

<213> Homo Sapien

<400> 23

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<210> 24

<211> 94

<212> PRT

<213> Homo Sapien

<400> 24

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 Lys Thr Cys Cys Phe Gln Tyr Ser His Lys Pro Leu Pro Trp Thr
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 Trp Val Arg Ser Tyr Glu Phe Thr Ser Asn Ser Cys Ser Gln Arg
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Lys	Asn	Glu	Ser	Ala 185	Ala	Ser	Ser	Thr	Gly 190	Lys	Thr	Pro	Ala	Ala 195
Glu	Glu	Thr	Val	Thr 200	Thr	Ile	Leu	Gly	Met 205	Leu	Ala	Ser	Pro	Tyr 210
His	Tyr	Leu	Ile	Ile 215	Ile	Val	Val	Leu	Val 220	Ile	Ile	Leu	Ala	Val 225
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Ala	Glu	Leu	Thr	Gly 305	Val	Thr	Val	Glu	Ser 310	Pro	Glu	Glu	Pro	Gln 315
Arg	Leu	Leu	Glu	Gln 320	Ala	Glu	Ala	Glu	Gly 325	Cys	Gln	Arg	Arg	Arg 330
Leu	Leu	Val	Pro	Val 335	Asn	Asp	Ala	Asp	Ser 340	Ala	Asp	Ile	Ser	Thr 345
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Thr	Ile	Gln	Asp	Gln 365	Leu	Val	Gly	Ser	Glu 370	Lys	Leu	Phe	Tyr	Glu 375
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Leu Ile Pro Asp Ala Pro Leu Ser Ser Ala Ala Tyr Ser Ile Arg
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Gln Lys Cys Asp His Trp Thr Pro Cys Pro Ser Asp Thr Tyr Ala
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Tyr Arg Leu Leu Ser Gly Gly Gly Arg Ser Lys Tyr Ala Lys Ile
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Cys Phe Glu Asp Asn Leu Leu Met Gly Glu Gln Leu Gly Asn Val
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Val Thr Ala Thr Arg Cys Phe Asp Met Tyr Glu Gly Asp Asn Ser
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agagcagggc actgtgtccg gcggagccaa gtccactctg ggggagctct 1900
ggcggggacc acgggccact gctcacccac tggccccgag gggggtgtag 1950
acgccaagac tcacgcatgt gtgacatccg gagtcctgga gccgggtgtc 2000
ccagtggcac cactaggtgc ctgctgcctc cacagtgggg ttcacaccca 2050
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ctccagccag acctgcctca cccaccaatg cagccggggc tggcgacacc 2150
agccaggtge tggtcttggg ccagttctcc cacgacggct caccctcccc 2200
tecatetgeg ttgatgetea gaategeeta eetgtgeetg egtgtaaace 2250
acagecteag accagetatg gggagaggae aacaeggagg atatecaget 2300
tccccggtct ggggtgagga atgtggggag cttgggcatc ctcctccagc 2350
ctcctccagc ccccaggcag tgccttacct gtggtgccca gaaaagtgcc 2400
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<210> 41

<211> 263

<212> PRT

<213> Homo Sapien

<400> 41

Met Arg Pro Gly Ala Pro Gly Pro Leu Trp Pro Leu Pro Trp Gly 1 5 15

Ala Leu Ala Trp Ala Val Gly Phe Val Ser Ser Met Gly Ser Gly 20 25 30

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Asn Pro Ala Pro Gly Gly Val Cys Trp Leu Gln Gln Gly Gln Glu
                 35
                                      40
                                                           45
Ala Thr Cys Ser Leu Val Leu Gln Thr Asp Val Thr Arg Ala Glu
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                                      55
                                                           60
Cys Cys Ala Ser Gly Asn Ile Asp Thr Ala Trp Ser Asn Leu Thr
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                                      70
                                                           75
His Pro Gly Asn Lys Ile Asn Leu Leu Gly Phe Leu Gly Leu Val
                 80
                                                           90
                                      85
His Cys Leu Pro Cys Lys Asp Ser Cys Asp Gly Val Glu Cys Gly
                                     100
                                                          105
Pro Gly Lys Ala Cys Arg Met Leu Gly Gly Arg Pro Arg Cys Glu
                110
                                     115
                                                          120
Cys Ala Pro Asp Cys Ser Gly Leu Pro Ala Arg Leu Gln Val Cys
                125
                                     130
                                                          135
Gly Ser Asp Gly Ala Thr Tyr Arg Asp Glu Cys Glu Leu Arg Ala
                                     145
                140
                                                          150
Ala Arg Cys Arg Gly His Pro Asp Leu Ser Val Met Tyr Arg Gly
                155
                                     160
                                                          165
Arg Cys Arg Lys Ser Cys Glu His Val Val Cys Pro Arg Pro Gln
                                     175
                170
                                                          180
Ser Cys Val Val Asp Gln Thr Gly Ser Ala His Cys Val Val Cys
                185
                                     190
                                                          195
Arg Ala Ala Pro Cys Pro Val Pro Ser Ser Pro Gly Gln Glu Leu
                200
                                     205
                                                          210
Cys Gly Asn Asn Asn Val Thr Tyr Ile Ser Ser Cys His Met Arg
                215
                                     220
                                                          225
Gln Ala Thr Cys Phe Leu Gly Arg Ser Ile Gly Val Arg His Ala
                230
                                     235
                                                          240
Gly Ser Cys Ala Gly Thr Pro Glu Glu Pro Pro Gly Gly Glu Ser
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                                                          255
                                     250
Ala Glu Glu Glu Asn Phe Val
                260
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<210> 42

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 42

tcctgtgagc acgtggtgtg 20

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<210> 43
 <211> 18
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
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 <210> 44
 <211> 18
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 44
  aaggccaaga aggctgcc 18
 <210> 45
 <211> 18
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 45
  ccaggcctgc agacccag 18
 <210> 46
 <211> 24
 <212> DNA
 <213> Artificial Sequence
 <220>
 <223> Synthetic oligonucleotide probe
 <400> 46
  cttcctcagt ccttccagga tatc 24
 <210> 47
 <211> 24
 <212> DNA
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· <220>
 <223> Synthetic oligonucleotide probe
 <400> 47
  aagctggata tcctccgtgt tgtc 24
 <210> 48
 <211> 27
 <212> DNA
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<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 48
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<210> 49
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<213> Artificial Sequence
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<223> Synthetic oligonucleotide probe
<400> 49
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<210> 50
<211> 44
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 50
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<210> 51
<211> 1690
<212> DNA
<213> Homo Sapien
<400> 51
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gccgagctgc gtgctccgcc agataaaatc gcgattattg gagccggaat 150
tggtggcact tcagcagcct attacctgcg gcagaaattt gggaaagatg 200
tgaagataga cctgtttgaa agagaagagg tcgggggccg cctggctacc 250
atgatggtgc aggggcaaga atacgaggca ggaggttctg tcatccatcc 300
tttaaatctg cacatgaaac gttttgtcaa agacctgggt ctctctgctg 350
ttcaggcctc tggtggccta ctggggatat ataatggaga gactctggta 400
tttgaggaga gcaactggtt cataattaac gtgattaaat tagtttggcg 450
ctatggattt caatccctcc gtatgcacat gtgggtagag gacgtgttag 500
acaagttcat gaggatctac cgctaccagt ctcatgacta tgccttcagt 550
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gcttaatcga acacttcttg aaaccttgca aaaggccggc ttttctgaga 650
agttcctcaa tgaaatgatt gctcctgtta tgagggtcaa ttatggccaa 700
agcacggaca tcaatgcctt tgtgggggcg gtgtcactgt cctgttctga 750
ttctggcctt tgggcagtag aaggtggcaa taaacttgtt tgctcagggc 800
ttctgcaggc atccaaaagc aatcttatat ctggctcagt aatgtacatc 850
gaggagaaaa caaagaccaa gtacacagga aatccaacaa agatgtatga 900
agtggtctac caaattggaa ctgagactcg ttcagacttc tatgacatcg 950
tettggtgge caeteegttg aategaaaaa tgtegaatat taettttete 1000
aactttgatc ctccaattga ggaattccat caatattatc aacatatagt 1050
gacaacttta gttaaggggg aattgaatac atctatcttt agctctagac 1100
ccatagataa atttggcctt aatacagttt taaccactga taattcagat 1150
ttgttcatta acagtattgg gattgtgccc tctgtgagag aaaaggaaga 1200
tcctgagcca tcaacagatg gaacatatgt ttggaagatc ttttcccaag 1250
aaactcttac taaagcacaa attttaaagc tctttctgtc ctatgattat 1300
gctgtgaaga agccatggct tgcatatcct cactataagc ccccggagaa 1350
atgcccctct atcattctcc atgatcgact ttattacctc aatggcatag 1400
agtgtgcagc aagtgccatg gagatgagtg ccattgcagc ccacaacgct 1450
gcactccttg cctatcaccg ctggaacggg cacacagaca tgattgatca 1500
ggatggctta tatgagaaac ttaaaactga actatgaagt gacacactcc 1550
tttttcccct cctagttcca aatgactatc agtggcaaaa aagaacaaaa 1600
tctgagcaga gatgattttg aaccagatat tttgccatta tcattgttta 1650
ataaaagtaa tccctgctgg tcataggaaa aaaaaaaaa 1690
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<210> 52

<211> 505

<212> PRT

<213> Homo Sapien

<400> 52

Met Gly Arg Val Val Ala Glu Leu Val Ser Ser Leu Leu Gly Leu 1 5 10 15

Trp Leu Leu Cys Ser Cys Gly Cys Pro Glu Gly Ala Glu Leu 20 25 30

	, Alc	reic) FIC	35		, TTE	: Ald	ııre	40	_	Ala	r GTŽ	, 11€	4 G I
Gly	Thr	: Ser	Ala	Ala 50		Tyr	Leu	Arg	Glr 55		Phe	e Gly	r Lys	As _]
Val	. Lys	: Ile	e Asp	Leu 65		Glu	Arg	Glu	Glu 70		Gly	Gly	Arg	Lei 7
Ala	Thr	Met	. Met	Val 80		Gl.y	Gln	Glu	Туr 85		Ala	Gly	Gly	Ser 90
Val	Ile	His	Pro	Leu 95		Leu	His	Met	Lys 100		Phe	Val	Lys	Asp 105
Leu	Gly	Leu	Ser	Ala 110		Gln	Ala	Ser	Gly 115		Leu	Leu	Gly	11e
Tyr	Asn	Gly	Glu	Thr 125		Val	Phe	Glu	Glu 130		Asn	Trp	Phe	Ile 135
Ile	Asn	Val	Ile	Lys 140		Val	Trp	Arg	Tyr 145	Gly	Phe	Gln	Ser	Leu 150
Arg	Met	His	Met	Trp 155	Val	Glu	Asp	Val	Leu 160	Asp	Lys	Phe	Met	Arg 165
Ile	Tyr	Arg	Tyr	Gln 170	Ser	His	Asp	Tyr	Ala 175	Phe	Ser	Ser	Val	Glu 180
Lys	Leu	Leu	His	Ala 185	Leu	Gly	Gly	Asp	Asp 190	Phe	Leu	Gly	Met	Leu 195
Asn	Arg	Thr	Leu	Leu 200	Glu	Thr	Leu	Gln	Lys 205	Ala	Gly	Phe	Ser	Glu 210
Lys	Phe	Leu	Asn	Glu 215	Met	Ile	Ala	Pro	Val 220	Met	Arg	Val	Asn	Tyr 225
Gly	Gln	Ser	Thr	Asp 230	Ile	Asn	Ala	Phe	Val 235	Gly	Ala	Val	Ser	Leu 240
Ser	Cys	Ser	Asp	Ser 245	Gly	Leu	Trp	Ala	Val 250	Glu	Gly	Gly	Asn	Lys 255
Leu	Val	Cys	Ser	Gly 260		Leu				Lys			Leu	Ile 270
Ser	Gly	Ser	Val	Met 275	Tyr	Ile	Glu	Glu	Lys 280	Thr	Lys	Thr	Lys	Tyr 285
Thr	Gly	Asn	Pro	Thr 290	Lys	Met	Tyr	Glu	Val 295	Val	Tyr	Gln	Ile	Gly 300
Thr	Glu	Thr	Arg	Ser 305	Asp	Phe	Tyr	Asp	Ile 310	Val	Leu	Val	Ala	Thr 315
Pro	Leu	Asn	Arg	Lys	Met	Ser	Asn	Ile	Thr	Phe	Leu	Asn	Phe	Asp

.

				320					325					330
Pro	Pro	Ile	Glu	Glu 335	Phe	His	Gln	Tyr	Tyr 340	Gln	His	Ile	Val	Thr 345
Thr	Leu	Val	Lys	Gly 350	Glu	Leu	Asn	Thr	Ser 355	Ile	Phe	Ser	Ser	Arg 360
Pro	Ile	Asp	Lys	Phe 365	Gly	Leu	Asn	Thr	Val 370	Leu	Thr	Thr	Asp	Asn 375
Ser	Asp	Leu	Phe	Ile 380	Asn	Ser	Ile	Gly	Ile 385	Val	Pro	Ser	Val	Arg 390
Glu	Lys	Glu	Asp	Pro 395	Glu	Pro	Ser	Thr	Asp 400	Gly	Thr	Tyr	Val	Trp 405
Lys	Ile	Phe	Ser	Gln 410	Glu	Thr	Leu	Thr	Lys 415	Ala	Gln	Ile	Leu	Lys 420
Leu	Phe	Leu	Ser	Tyr 425	Asp	Tyr	Ala	Val	Lys 430	Lys	Pro	Trp	Leu	Ala 435
Tyr	Pro	His	Tyr	Lys 440	Pro	Pro	Glu	Lys	Cys 445	Pro	Ser	Ile	Ile	Leu 450
His	Asp	Arg	Leu	Tyr 455	Tyr	Leu	Asn	Gly	Ile 460	Glu	Cys	Ala	Ala	Ser 465
Ala	Met	Glu	Met	Ser 470	.Ala	Ile	Ala	Ala	His 475	Asn	Ala	Ala	Leu	Leu 480
Ala	Tyr	His	Arg	Trp 485	Asn	Gly	His	Thr	Asp 490	Met	Ile	Asp	Gln	Asp 495
Gly	Leu	Tyr	Glu	Lys 500	Leu	Lys	Thr	Glu	Leu 505					

<210> 53

<400> 53

catttccaac aagagcactg gccaagtcag cttcttctga gagagtctct 50
agaagacatg atgctacact cagctttggg tctctgcctc ttactcgtca 100
cagtttcttc caaccttgcc attgcaataa aaaaggaaaa gaggcctcct 150
cagacactct caagaggatg gggagatgac atcacttggg tacaaactta 200
tgaagaaggt ctcttttatg ctcaaaaaag taagaagcca ttaatggtta 250
ttcatcacct ggaggattgt caatactctc aagcactaaa gaaagtattt 300
gcccaaaatg aagaaataca agaaatggct cagaataagt tcatcatgct 350

<211> 728

<212> DNA

<213> Homo Sapien

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<210> 54

<211> 166

<212> PRT

<213> Homo Sapien

<400> 54

Met Met Leu His Ser Ala Leu Gly Leu Cys Leu Leu Leu Val Thr
1 5 10 15

Val Ser Ser Asn Leu Ala Ile Ala Ile Lys Lys Glu Lys Arg Pro 20 25 30

Pro Gln Thr Leu Ser Arg Gly Trp Gly Asp Asp Ile Thr Trp Val
35 40 45

Gln Thr Tyr Glu Glu Gly Leu Phe Tyr Ala Gln Lys Ser Lys Lys 50 55 60

Pro Leu Met Val Ile His His Leu Glu Asp Cys Gln Tyr Ser Gln 75

Ala Leu Lys Lys Val Phe Ala Gln Asn Glu Glu Ile Gln Glu Met 80 85 90

Ala Gln Asn Lys Phe Ile Met Leu Asn Leu Met His Glu Thr Thr
95 100 105

Asp Lys Asn Leu Ser Pro Asp Gly Gln Tyr Val Pro Arg Ile Met 110 115 120

Phe Val Asp Pro Ser Leu Thr Val Arg Ala Asp Ile Ala Gly Arg

Tyr Ser Asn Arg Leu Tyr Thr Tyr Glu Pro Arg Asp Leu Pro Leu 140 145 150

Leu Ile Glu Asn Met Lys Lys Ala Leu Arg Leu Ile Gln Ser Glu
155 160 165

Leu

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<210> 55
 <211> 537
 <212> DNA
<213> Homo Sapien
 <400> 55
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 gcgtcagaga gaaagaactg actgaaacgt ttgagatgaa gaaagttctc 100
 ctcctgatca cagccatctt ggcagtggct gttggtttcc cagtctctca 150
 agaccaggaa cgagaaaaaa gaagtatcag tgacagcgat gaattagctt 200
 cagggttttt tgtgttccct tacccatatc catttcgccc acttccacca 250
 attccatttc caagatttcc atggtttaga cgtaattttc ctattccaat 300
 acctgaatct gcccctacaa ctccccttcc tagcgaaaag taaacaagaa 350
 ggataagtca cgataaacct ggtcacctga aattgaaatt gagccacttc 400
 cttgaagaat caaaattcct gttaataaaa gaaaaacaaa tgtaattgaa 450
 atagcacaca gcattctcta gtcaatatct ttagtgatct tctttaataa 500
 acatgaaagc aaagattttg gtttcttaat ttccaca 537
<210> 56
<211> 85
<212> PRT
<213> Homo Sapien
<400> 56
 Met Lys Lys Val Leu Leu Leu Ile Thr Ala Ile Leu Ala Val Ala
   1
                                       10
                                                           15
 Val Gly Phe Pro Val Ser Gln Asp Gln Glu Arg Glu Lys Arg Ser
 Ile Ser Asp Ser Asp Glu Leu Ala Ser Gly Phe Phe Val Phe Pro
                                       40
 Tyr Pro Tyr Pro Phe Arg Pro Leu Pro Pro Ile Pro Phe Pro Arg
                  50
                                       55
                                                           60
 Phe Pro Trp Phe Arg Arg Asn Phe Pro Ile Pro Ile Pro Glu Ser
                                      70
Ala Pro Thr Thr Pro Leu Pro Ser Glu Lys
                  80
                                      85
<210> 57
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<211> 2997

<213> Homo Sapien

<212> DNA

<400> 57

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tgtgaccctg ctgagatctc ctaagcggca ctcagtgcaa ataacaatag 1500 caactccccc agcagtaaaa cagaccatca gtaacatttc aggatttaat 1550 gaaacctgct tgagatggag aagcatcaag acagctgata tggaggagat 1600 gtatttattc cacatttggg gccagagatg gtatcagaag gaatttgccc 1650 aggaaatgac ctttaatatc agtagcagca gccgagatcc cgaggtgtgc 1700 ttggacctac gtccgggtac caactacaat gtcagtctcc gggctctgtc 1750 ttcggaactt cctgtggtca tctccctgac aacccagata acagagcctc 1800 ccctcccgga agtagaattt tttacggtgc acagaggacc tctaccacgc 1850 ctcagactga ggaaagccaa ggagaaaaat ggaccaatca gttcatatca 1900 ggtgttagtg cttcccctgg ccctccaaag cacattttct tgtgattctg 1950 aaggcgcttc ctccttcttt agcaacgcct ctgatgctga tggatacgtg 2000 gctgcagaac tactggccaa agatgttcca gatgatgcca tggagatacc 2050 tataggagac aggctgtact atggggaata ttataatgca cccttgaaaa 2100 gagggagtga ttactgcatt atattacgaa tcacaagtga atggaataag 2150 gtgagaagac actcctgtgc agtttgggct caggtgaaag attcgtcact 2200 catgctgctg cagatggcgg gtgttggact gggttccctg gctgttgtga 2250 tcattctcac attcctctcc ttctcagcgg tgtgatggca gatggacact 2300 gagtggggag gatgcactgc tgctgggcag gtgttctggc agcttctcag 2350 gtgcccgcac agaggctccg tgtgacttcc gtccagggag catgtgggcc 2400 tgcaactttc tccattccca gctgggcccc attcctggat ttaagatggt 2450 ggctatccct gaggagtcac cataaggaga aaactcagga attctgagtc 2500 ttccctgcta caggaccagt tctgtgcaat gaacttgaga ctcctgatgt 2550 acactgtgat attgaccgaa ggctacatac agatctgtga atcttggctg 2600 ggacttcctc tgagtgatgc ctgagggtca gctcctctag acattgactg 2650 caagagaatc tctgcaacct cctatataaa agcatttctg ttaattcatt 2700 cagaatccat totttacaat atgcagtgag atgggottaa gtttgggota 2750 gagtttgact ttatgaagga ggtcattgaa aaagagaaca gtgacgtagg 2800 caaatgtttc aagcacttta gaaacagtac ttttcctata attagttgat 2850 atactaatga gaaaatatac tagcctggcc atgccaataa gtttcctgct 2900

gtgtctgtta ggcagcattg ctttgatgca atttctattg tcctatatat 2950 tcaaaagtaa tgtctacatt ccagtaaaaa tatcccgtaa ttaaaaa 2997

- <210> 58
- <211> 747
- <212> PRT
- <213> Homo Sapien
- <400> 58
- Met Gly Arg Gly Pro Trp Asp Ala Gly Pro Ser Arg Arg Leu Leu
 1 5 10 15
- Pro Leu Leu Leu Leu Gly Leu Ala Arg Gly Ala Ala Gly Ala 20 25 30
- Pro Gly Pro Asp Gly Leu Asp Val Cys Ala Thr Cys His Glu His
 35 40 45
- Ala Thr Cys Gln Gln Arg Glu Gly Lys Lys Ile Cys Ile Cys Asn
 50 55 60
- Tyr Gly Phe Val Gly Asn Gly Arg Thr Gln Cys Val Asp Lys Asn 65 70 75
- Glu Cys Gln Phe Gly Ala Thr Leu Val Cys Gly Asn His Thr Ser 80 85 90
- Cys His Asn Thr Pro Gly Gly Phe Tyr Cys Ile Cys Leu Glu Gly 95 100 105
- Tyr Arg Ala Thr Asn Asn Asn Lys Thr Phe Ile Pro Asn Asp Gly 110 115
- Thr Phe Cys Thr Asp Ile Asp Glu Cys Glu Val Ser Gly Leu Cys 125 130 135
- Arg His Gly Gly Arg Cys Val Asn Thr His Gly Ser Phe Glu Cys 140 145 150
- Tyr Cys Met Asp Gly Tyr Leu Pro Arg Asn Gly Pro Glu Pro Phe 155 160 165
- His Pro Thr Thr Asp Ala Thr Ser Cys Thr Glu Ile Asp Cys Gly 170 175 180
- Thr Pro Pro Glu Val Pro Asp Gly Tyr Ile Ile Gly Asn Tyr Thr
 185 190 195
- Ser Ser Leu Gly Ser Gln Val Arg Tyr Ala Cys Arg Glu Gly Phe 200 205 210
- Phe Ser Val Pro Glu Asp Thr Val Ser Ser Cys Thr Gly Leu Gly 215 220 225
- Thr Trp Glu Ser Pro Lys Leu His Cys Gln Glu Ile Asn Cys Gly 230 235 240

Asn	Pro	Pro	Glu	Met 245		His	Ala	Ile	Leu 250		Gly	Asn	His	Ser 255
Ser	Arg	Leu	Gly	Gly 260		Ala	Arg	Tyr	Val 265		Gln	Glu	Gly	Phe 270
Glu	Ser	Pro	Gly	Gly 275		Ile	Thr	Ser	Val 280		Thr	Glu	Lys	Gly 285
Thr	Тхр	Arg	Glu	Ser 290		Leu	Thr	Cys	Thr 295		Ile	Leu	Thr	Lys 300
Ile	Asn	Asp	Val	Ser 305		Phe	Asn	Asp	Thr 310		Val	Arg	Trp	Gln 315
Ile	Asn	Ser	Arg	Arg 320	Ile	Asn	Pro	Lys	Ile 325	Ser	Tyr	Val	Ile	Ser 330
Ile	Lys	Gly	Gln	Arg 335	Leu	Asp	Pro	Met	Glu 340	Ser	Val	Arg	Glu	Glu 345
Thr	Val	Asn	Leu	Thr 350		Asp			Thr 355		Glu			Leu 360
Ala	Leu	Tyr	Pro	Gly 365	Thr	Asn	Tyr	Thr	Val 370	Asn	Ile	Ser	Thr	Ala 375
Pro	Pro	Arg	Arg	Ser 380	Met	Pro	Ala	Val	Ile 385	Gly	Phe	Gln	Thr	Ala 390
Glu	Val	Asp	Leu	Leu 395	Glu	Asp	Asp	Gly	Ser 400	Phe	Asn	Ile	Ser	Ile 405
Phe	Asn	Glu	Thr	Cys 410	Leu	Lys	Leu	Asn	Arg 415	Arg	Ser	Arg	Lys	Val 420
Gly	Ser	Glu	His	Met 425	Tyr	Gln	Phe	Thr	Val 430	Leu	Gly	Gln	Arg	Trp 435
Tyr	Leu	Ala	Asn	Phe 440	Ser	His	Ala	Thr	Ser 445	Phe	Asn	Phe	Thr	Thr 450
Arg	Glu	Gln	Val	Pro 455	Val	Val	Cys	Leu	Asp 460	Leu	Tyr	Pro	Thr	Thr 465
Asp	Tyr	Thr	Val	Asn 470	Val	Thr	Leu	Leu	Arg 475	Ser	Pro	Lys	Arg	His 480
Ser	Val	Gln	Ile	Thr 485	Ile	Ala	Thr	Pro	Pro 490	Ala	Val	Lys	Gln	Thr 495
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Ser	Ile	Lys	Thr	Ala 515	Asp	Met	Glu	Glu	Met 520	Tyr	Leu	Phe	His	Ile 525
Trp	Gly	Gln	Arg	Trp	Tyr	Gln	Lys	Glu	Phe	Ala	Gln	Glu	Met	Thr

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Ser	Glu	Leu	Pro	Val 575	Val	Ile	Ser	Leu	Thr 580	Thr	Gln	Ile	Thr	Glu 585
Pro	Pro	Leu	Pro	Glu 590	Val	Glu	Phe	Phe	Thr 595	Val	His	Arg	Gly	Pro 600
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Ile	Ser	Ser	Tyr	Gln 620	Val	Leu	Val	Leu	Pro 625	Leu	Ala	Leu	Gln	Ser 630
Thr	Phe	Ser	Cys	Asp 635	Ser	Glu	Gly	Ala	Ser 640	Ser	Phe	Phe	Ser	Asn 645
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Asp	Val	Pro	Asp	Asp 665	Ala	Met	Glu	Ile	Pro 670	Ile	Gly	Asp	Arg	Leu 675
Tyr	Tyr	Gly	Glu	Tyr 680	Tyr	Asn	Ala	Pro	Leu 685	Lys	Arg	Gly	Ser	Asp 690
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<212> PRT

<213> Homo Sapien

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Met	Thr	Leu	Ala	Pro 50	Gly	His	Ala	Ala	Leu 55	Glu	Thr	Gln	Thr	Leu 60
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Pro	Glu	Ala	Glu	Thr 80	Arg	Gly	Ala	Lys	Arg 85	Ile	Ser	Pro	Ala	Arg 90
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Ile	Ala	Thr	Ser	Val 110	Glu	Thr	Ser	Ala	Ala 115	Ser	Gly	Ser	Pro	Glu 120
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Glu	Glu	Ala	Ile	Phe 140	Asp	Thr	Leu	Cys	Thr 145	Asp	Asp	Ser	Ser	Glu 150
Glu	Ala	Lys	Thr	Leu 155	Thr	Met	Asp	Ile	Leu 160	Thr	Leu	Ala	His	Thr 165
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Asp	Gly	Pro	His	Pro 185	Val	Ile	Thr	Pro	Ser 190	Arg	Ala	Ser	Glu	Ser 195
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Thr	Pro	Ser	Trp	Ser 230	Pro	Gly	Ser	Asp	Val 235	Thr	Leu	Leu	Ala	Glu 240
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Thr	Glu	Ile	Glu	Thr 260	Thr	Thr	Ser	Ser	Ile 265	Pro	Gly	Ala	Ser	Asp 270
Ile	Asp	Leu	Ile	Pro 275	Thr	Glu	Gly	Val	Lys 280	Ala	Ser	Ser	Thr	Ser 285
Asp	Pro	Pro	Ala	Leu 290	Pro	Asp	Ser	Thr	Glu 295	Ala	Lys	Pro	His	Ile 300
Thr	Glu	Val	Thr	Ala 305	Ser	Ala	Glu	Thr	Leu 310	Ser	Thr	Ala	Gly	Thr 315

Thr	Glu	Ser	Ala	Ala 320	Pro	His	Ala	Thr	Val 325	Gly	Thr	Pro	Leu	Pro 330
Thr	Asn	Ser	Ala	Thr 335	Glu	Arg	Glu	Val	Thr 340	Ala	Pro	Gly	Ala	Thr 345
Thr	Leu	Ser	Gly	Ala 350	Leu	Val	Thr	Val	Ser 355	Arg	Asn	Pro	Leu	Glu 360
Glu	Thr	Ser	Ala	Leu 365	Ser	Val	Glu	Thr	Pro 370	Ser	Tyr	Val	Lys	Val 375
Ser	Gly	Ala	Ala	Pro 380	Val	Ser	Ile	Glu	Ala 385	Gly	Ser	Ala	Val	Gly 390
Lys	Thr	Thr	Ser	Phe 395	Ala	Gly	Ser	Ser	Ala 400	Ser	Ser	Tyr	Ser	Pro 405
Ser	Glu	Ala	Ala	Leu 410	Lys	Asn	Phe	Thr	Pro 415	Ser	Glu	Thr	Pro	Thr 420
Met	Asp	Ile	Ala		_	Gly					Ser	_	Asp	Pro 435
Leu	Pro	Ser	Val	Pro 440	Pro	Thr	Thr	Thr	Asn 445	Ser	Ser	Arg	Gly	Thr 450
Asn	Ser	Thr	Leu	Ala 455	Lys	Ile	Thr	Thr	Ser 460	Ala	Lys	Thr	Thr	Met 465
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<212> DNA

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- Gln Phe Leu Gly Leu Asp Lys Ala Pro Ser Pro Gln Lys Phe Gln
 35 40 45
- Pro Val Pro Tyr Ile Leu Lys Lys Ile Phe Gln Asp Arg Glu Ala 50 55 60
- Ala Ala Thr Thr Gly Val Ser Arg Asp Leu Cys Tyr Val Lys Glu 65 70 75
- Leu Gly Val Arg Gly Asn Val Leu Arg Phe Leu Pro Asp Gln Gly

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Tyr	Tyr	Asn	Leu	Gly 140	Pro	Glu	Leu	Glu	Leu 145	Ala	Leu	Phe	Leu	Val 150
Gln	Glu	Pro	His	Val 155	Trp	Gly	Gln	Thr	Thr 160	Pro	Lys	Pro	Gly	Lys 165
Met	Phe	Val	Leu	Arg 170	Ser	Val	Pro	Trp	Pro 175	Gln	Gly	Ala	Val	His 180
Phe	Asn	Leu	Leu	Asp 185	Val	Ala	Lys	Asp	Trp 190	Asn	Asp	Asn	Pro	Arg 195
Lys	Asn	Phe	Gly	Leu 200	Phe	Leu	Glu	Ile	Leu 205	Val	Lys	Glu	Asp	Arg 210
Asp	Ser	Gly	Val	Asn 215	Phe	Gln	Pro	Glu	Asp 220	Thr	Cys	Ala	Arg	Leu 225
Arg	Cys	Ser	Leu	His 230	Ala	Ser	Leu	Leu	Val 235	Val	Thr	Leu	Asn	Pro 240
Asp	Gln	Cys	His	Pro 245	Ser	Arg	Lys	Arg	Arg 250	Ala	Ala	Ile	Pro	Val 255
Pro	Lys	Leu	Ser	Cys 260	Lys	Asn	Leu	Cys	His 265	Arg	His	Gln	Leu	Phe 270
Ile	Asn	Phe	Arg	Asp 275	Leu	Gly	Trp	His	Lys 280	Trp	Ile	Ile	Ala	Pro 285
Lys	Gly	Phe	Met	Ala 290	Asn	Tyr	Cys	His	Gly 295	Glu	Cys	Pro	Phe	Ser 300
Leu	Thr	Ile	Ser	Leu 305	Asn	Ser	Ser	Asn	Tyr 310	Ala	Phe	Met	Gln	Ala 315
Leu	Met	His	Ala	Val 320	Asp	Pro	Glu	Ile	Pro 325	Gln	Ala	Val	Cys	Ile 330
Pro	Thr	Lys	Leu	Ser 335	Pro	Ile	Ser	Met	Leu 340	Tyr	Gln	Asp	Asn	Asn 345
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 35 40 45
- Pro Pro Asp His Ala Glu Arg Ala Glu Glu Gln His Glu Lys Tyr
 50 55 60
- Arg Pro Ser Gln Asp Gln Gly Leu Pro Ala Ser Arg Cys Leu Arg
 65 70 75
- Cys Cys Asp Pro Gly Thr Ser Met Tyr Pro Ala Thr Ala Val Pro 80 85 90
- Gln Ile Asn Ile Thr Ile Leu Lys Gly Glu Lys Gly Asp Arg Gly
 95 100 105
- Asp Arg Gly Leu Gln Gly Lys Tyr Gly Lys Thr Gly Ser Ala Gly 110 115 120
- Ala Arg Gly His Thr Gly Pro Lys Gly Gln Lys Gly Ser Met Gly
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- Ala Pro Gly Glu Arg Cys Lys Ser His Tyr Ala Ala Phe Ser Val 140 145 150
- Gly Arg Lys Lys Pro Met His Ser Asn His Tyr Tyr Gln Thr Val 155 160 165
- Ile Phe Asp Thr Glu Phe Val Asn Leu Tyr Asp His Phe Asn Met 170 175 180
- Phe Thr Gly Lys Phe Tyr Cys Tyr Val Pro Gly Leu Tyr Phe Phe 185 190 195
- Ser Leu Asn Val His Thr Trp Asn Gln Lys Glu Thr Tyr Leu His

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gtgatagcag tcccaaaaaa tgggagtatg atttgtttgg atcctgatgc 350
tccatgggtg aaggctactg ttggcccaat tactaacagg ttcctacctg 400
aggaceteaa acaaaaggaa ttteeacegg caatgaaget tetgtatagt 450
gttgagcatg aaaagcctct atatctttca tttgggagac ctgagaacaa 500
gagaatattt ccctttccaa ttcgggagac ctctagacac tttgctgatt 550
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gcgttagtct ggtgtatgga tctatgagct ctcttttaat attttattat 750
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ccccatcccc atttcttgat attacatata atggcatcat ataccccttt 850
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<210> 78

<211> 167

<212> PRT

<213> Homo Sapien

<400> 78

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Glu Val Ile Ala Val Pro Lys Asn Gly Ser Met Ile Cys Leu Asp
65 70 75

Pro Asp Ala Pro Trp Val Lys Ala Thr Val Gly Pro Ile Thr Asn 80 85 90

Arg Phe Leu Pro Glu Asp Leu Lys Gln Lys Glu Phe Pro Pro Ala 95 100 105

Met Lys Leu Leu Tyr Ser Val Glu His Glu Lys Pro Leu Tyr Leu 110 115 120

Ser Phe Gly Arg Pro Glu Asn Lys Arg Ile Phe Pro Phe Pro Ile 125 130 135

Arg Glu Thr Ser Arg His Phe Ala Asp Leu Ala His Asn Ser Asp
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Arg Asn Phe Leu Arg Asp Ser Ser Glu Val Ser Leu Thr Gly Ser 155 160 165

Asp Ala

<210> 79

<211> 798

<212> DNA

<213> Homo Sapien

<220>

<221> unsure

<222> 794

<223> unknown base

<400> 79

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ccccgcaagc gctctcaggc agagctatgt gcagacccaa aggagctctg 250
ggtgcagcag ctgatgcagc atctggacaa gacaccatcc ccacagaaac 300
cagcccaggg ctgcaggaag gacagggggg cctccaagac tggcaagaaa 350
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agggccatag cccagtgagc agcctggagc cctggagacc ccaccagcct 450
caccagcgct tgaagcctga acccaagatg caagaaggag gctatgctca 500
ggggccctgg agcagcacc ccatgctggc cttgccacac tctttctcct 550
gctttaacca ccccatctgc attccagct ctaccctgca tggctgagct 600

15

30

45

60

75

90

105

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gcccacagca ggccaggtcc agagagaccg aggagggaga gtctcccagg 650
 gagcatgaga ggaggcagca ggactgtccc cttgaaggag aatcatcagg 700
 accetggace tgatacgget ceceagtaca ecceacetet teettgtaaa 750
 tatgatttat acctaactga ataaaaagct gttctgtctt cccnccca 798
<210> 80
<211> 134
<212> PRT
<213> Homo Sapien
<400> 80
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                                      1.0
 Phe Gly Ile Pro Arg Thr Gln Gly Ser Asp Gly Gly Ala Gln Asp
                  20
                                      .25
 Cys Cys Leu Lys Tyr Ser Gln Arg Lys Ile Pro Ala Lys Val Val
                  35
 Arg Ser Tyr Arg Lys Gln Glu Pro Ser Leu Gly Cys Ser Ile Pro
                  50
                                      55
 Ala Ile Leu Phe Leu Pro Arg Lys Arg Ser Gln Ala Glu Leu Cys
                  65
                                      70
 Ala Asp Pro Lys Glu Leu Trp Val Gln Gln Leu Met Gln His Leu
                  80
                                      85
 Asp Lys Thr Pro Ser Pro Gln Lys Pro Ala Gln Gly Cys Arg Lys
                  95
                                     100
 Asp Arg Gly Ala Ser Lys Thr Gly Lys Lys Gly Lys Gly Ser Lys
                 110 115
 Gly Cys Lys Arg Thr Glu Arg Ser Gln Thr Pro Lys Gly Pro
                 125
                                     130
<210> 81
<211> 20
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 81
agacatggct cagtcactgg 20
<210> 82
<211> 19
<212> DNA
<213> Artificial Sequence
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<220>

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<223> Synthetic oligonucleotide probe
<400> 82
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<210> 83
<211> 924
<212> DNA
<213> Homo Sapien
<400> 83
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 cggtctcagg agatgtctga tttccacaga catgcaccat atagaagaga 150
 gtttccaaga aatcaaaaga gccatccaag ctaaggacac cttcccaaat 200
 gtcactatcc tgtccacatt ggagactctg cagatcatta agcccttaga 250
 tgtgtgctgc gtgaccaaga acctcctggc gttctacgtg gacagggtgt 300
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 attgccaact ctttcctcta catgcagaaa actctgcggc aatgtcagga 400
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 aatgttctca gcttgatgac aaggaacctg tatagtgatc cagggatgaa 600
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tgccttccca tctaatttat tgtaaagtca tatagtccat gtctgtgatg 850
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<210> 84
<211> 177
<212> PRT
<213> Homo Sapien
<400> 84
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                                                          15
  1
                                      10
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Ile Leu Cys Ser Val Asp Asn His Gly Leu Arg Arg Cys Leu Ile Ser Thr Asp Met His His Ile Glu Glu Ser Phe Gln Glu Ile Lys Arg Ala Ile Gln Ala Lys Asp Thr Phe Pro Asn Val Thr Ile Leu Ser Thr Leu Glu Thr Leu Gln Ile Ile Lys Pro Leu Asp Val Cys Cys Val Thr Lys Asn Leu Leu Ala Phe Tyr Val Asp Arg Val Phe Lys Asp His Gln Glu Pro Asn Pro Lys Ile Leu Arg Lys Ile Ser Ser Ile Ala Asn Ser Phe Leu Tyr Met Gln Lys Thr Leu Arg Gln Cys Gln Glu Gln Arg Gln Cys His Cys Arg Gln Glu Ala Thr Asn Ala Thr Arg Val Ile His Asp Asn Tyr Asp Gln Leu Glu Val His Ala Ala Ile Lys Ser Leu Gly Glu Leu Asp Val Phe Leu Ala Trp Ile Asn Lys Asn His Glu Val Met Phe Ser Ala

<400> 85

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tgggeggggt caceeegget gggacaagaa geegeegeet geetgeeegg 150
geeeggggag ggggetgggg etggggeegg aggegggtg tgagtgggtg 200
tgtgeggggg geggaggett gatgeaatee egataagaaa tgetegggtg 250
tettgggeae etaceegtgg ggeeegtaag gegetaetat ataaggetge 300
eggeeeggag eegeegeee gteagageag gagegetgeg teeaggatet 350
agggeeacga ceateeeaae eeggeaetea eageeeegaa gegeateeeg 400
gtegeegeee ageeteeege aeeeeeateg eeggagetge geegaagaee 450
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<210> 85

<211> 2137

<212> DNA

<213> Homo Sapien

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<210> 86

<211> 216

<212> PRT

<213> Homo Sapien

<400> 86

Met Arg Ser Gly Cys Val Val Val His Val Trp Ile Leu Ala Gly
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Leu Trp Leu Ala Val Ala Gly Arg Pro Leu Ala Phe Ser Asp Ala 20 25 30

Gly Pro His Val His Tyr Gly Trp Gly Asp Pro Ile Arg Leu Arg
35 40 45

His Leu Tyr Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu 50 55 60

Arg Ile Arg Ala Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser 65 70 75

Ala His Ser Leu Leu Glu Ile Lys Ala Val Ala Leu Arg Thr Val 80 85 90

Ala Ile Lys Gly Val His Ser Val Arg Tyr Leu Cys Met Gly Ala 95 100 105

Asp Gly Lys Met Gln Gly Leu Leu Gln Tyr Ser Glu Glu Asp Cys
110 115 120

Ala Phe Glu Glu Ile Arg Pro Asp Gly Tyr Asn Val Tyr Arg 125 130 135

Ser Glu Lys His Arg Leu Pro Val Ser Leu Ser Ser Ala Lys Gln
140 145 150

Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu Pro Leu Ser His Phe
155 160 165

Leu Pro Met Leu Pro Met Val Pro Glu Glu Pro Glu Asp Leu Arg 170 175 180

Gly His Leu Glu Ser Asp Met Phe Ser Ser Pro Leu Glu Thr Asp 185 190 195

Ser Met Asp Pro Phe Gly Leu Val Thr Gly Leu Glu Ala Val Arg 200 205 210

Ser Pro Ser Phe Glu Lys 215

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<210> 88
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<223> Synthetic oligonucleotide probe
<400> 88
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<210> 89
<211> 22
<212> DNA
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<223> Synthetic oligonucleotide probe
<400> 89
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<210> 90
<211> 1857
<212> DNA
<213> Homo Sapien
<400> 90
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 tggcgatcct gttgtgctcc ctggcattgg gcagtgttac agtgcactct 150
 tctgaacctg aagtcagaat tcctgagaat aatcctgtga agttgtcctg 200
 tgcctactcg ggcttttctt ctccccgtgt ggagtggaag tttgaccaag 250
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 acagctatgg ggaggtcaag gtcaagctca tcgtgcttgt gcctccatcc 450
 aagcctacag ttaacatccc ctcctctgcc accattggga accgggcagt 500
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<210> 91 <211> 299

<212> PRT <213> Homo Sapien

<400> 91 Met Gly Thr Lys Ala Gln Val Glu Arg Lys Leu Leu Cys Leu Phe Ile Leu Ala Ile Leu Leu Cys Ser Leu Ala Leu Gly Ser Val Thr Val His Ser Ser Glu Pro Glu Val Arg Ile Pro Glu Asn Asn Pro Val Lys Leu Ser Cys Ala Tyr Ser Gly Phe Ser Ser Pro Arg Val Glu Trp Lys Phe Asp Gln Gly Asp Thr Thr Arg Leu Val Cys Tyr Asn Asn Lys Ile Thr Ala Ser Tyr Glu Asp Arg Val Thr Phe Leu Pro Thr Gly Ile Thr Phe Lys Ser Val Thr Arg Glu Asp Thr Gly Thr Tyr Thr Cys Met Val Ser Glu Glu Gly Gly Asn Ser Tyr Gly Glu Val Lys Val Lys Leu Ile Val Leu Val Pro Pro Ser Lys Pro Thr Val Asn Ile Pro Ser Ser Ala Thr Ile Gly Asn Arg Ala Val Leu Thr Cys Ser Glu Gln Asp Gly Ser Pro Pro Ser Glu Tyr Thr Trp Phe Lys Asp Gly Ile Val Met Pro Thr Asn Pro Lys Ser Thr Arg Ala Phe Ser Asn Ser Ser Tyr Val Leu Asn Pro Thr Thr Gly Glu Leu Val Phe Asp Pro Leu Ser Ala Ser Asp Thr Gly Glu Tyr Ser Cys Glu Ala Arg Asn Gly Tyr Gly Thr Pro Met Thr Ser Asn Ala Val Arg Met Glu Ala Val Glu Arg Asn Val Gly Val Ile Val Ala Ala Val Leu Val Thr Leu Ile Leu Leu Gly Ile Leu Val Phe Gly Ile Trp Phe Ala Tyr Ser Arg Gly His Phe Asp Arg Thr Lys

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Lys Gly Thr Ser Ser Lys Lys Val Ile Tyr Ser Gln Pro Ser Ala
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                                      280
                                                           285
 Arg Ser Glu Gly Glu Phe Lys Gln Thr Ser Ser Phe Leu Val
                 290
                                      295
<210> 92
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<212> DNA
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<220>
<223> Synthetic oligonucleotide probe
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<210> 93
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<223> Synthetic oligonucleotide probe
<400> 93
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<210> 94
<211> 20
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<223> Synthetic oligonucleotide probe
<400> 94
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gtgagggacc agggcgccat gaccgaccag ctgagcaggc ggcagatccg 150
cgagtaccaa ctctacagca ggaccagtgg caagcacgtg caggtcaccg 200
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tgccggcctc ccagccgggc tcctgaagcc cgctgaaagg tcagcgactg 950
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<210> 99

<211> 205

<212> PRT

<213> Homo Sapien

<400> 99

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20 25 30

Ala Met Thr Asp Gln Leu Ser Arg Arg Gln Ile Arg Glu Tyr Gln
35 40 45

Leu Tyr Ser Arg Thr Ser Gly Lys His Val Gln Val Thr Gly Arg
50 55 60

Arg Ile Ser Ala Thr Ala Glu Asp Gly Asn Lys Phe Ala Lys Leu 65 70 75

Ile Val Glu Thr Asp Thr Phe Gly Ser Arg Val Arg Ile Lys Gly 80 85 90

Ala Glu Ser Glu Lys Tyr Ile Cys Met Asn Lys Arg Gly Lys Leu
95 100 105

Ile Gly Lys Pro Ser Gly Lys Ser Lys Asp Cys Val Phe Thr Glu
110 115 120

Ile Val Leu Glu Asn Asn Tyr Thr Ala Phe Gln Asn Ala Arg His
125 130 135

Glu Gly Trp Phe Met Ala Phe Thr Arg Gln Gly Arg Pro Arg Gln 140 145 150

Ala Ser Arg Ser Arg Gln Asn Gln Arg Glu Ala His Phe Ile Lys 155 160 165

Arg Leu Tyr Gln Gly Gln Leu Pro Phe Pro Asn His Ala Glu Lys
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Gln Lys Gln Phe Glu Phe Val Gly Ser Ala Pro Thr Arg Arg Thr 185 190 195

Lys Arg Thr Arg Arg Pro Gln Pro Leu Thr 200 205

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<222> 21
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 aaaaatgcac aattctatct cttgggcaat cttcacgggg ctggctgctc 200
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<210> 104

<211> 344

<212> PRT

<213> Homo Sapien

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Val	Arg	Ser	Gly	Asp 35	Ala	Thr	Phe	Pro	Lys 40	Ala	Met	Asp	Asn	Val 45
Thr	Val	Arg	Gln	Gly 50	Glu	Ser	Ala	Thr	Leu 55	Arg	Cys	Thr	Ile	Asp 60
Asn	Arg	Val	Thr	Arg 65	Val	Ala	Trp	Leu	Asn 70	Arg	Ser	Thr	Ile	Leu 75
Tyr	Ala	Gly	Asn	Asp 80	Lys	Trp	Cys	Leu	Asp 85	Pro	Arg	Val	Val	Leu 90
Leu	Ser	Asn	Thr	Gln 95	Thr	Gln	Tyr	Ser	Ile 100	Glu	Ile	Gln	Asn	Val 105
Asp	Val	Tyr	Asp	Glu 110	Gly	Pro	Tyr	Thr	Cys 115	Ser	Val	Gln	Thr	Asp 120
Asn	His	Pro	Lys	Thr 125	Ser	Arg	Val	His	Leu 130	Ile	Val	Gln	Val	Ser 135
Pro	Lys	Ile	Val	Glu 140	Ile	Ser	Ser	Asp	Ile 145	Ser	Ile	Asn	Glu	Gly 150
Asn	Asn	Ile	Ser	Leu 155	Thr	Cys	Ile	Ala	Thr 160	Gly	Arg	Pro	Glu	Pro 165
Thr	Val	Thr	Trp	Arg 170	His	Ile	Ser	Pro	Lys 175	Ala	Val	Gly	Phe	Val 180
Ser	Glu	Asp	Glu	Tyr 185	Leu	Glu	Ile	Gln	Gly 190	Ile	Thr	Arg	Glu	Gln 195
Ser	Gly	Asp	Tyr	Glu 200	Cys	Ser	Ala	Ser	Asn 205	Asp	Val	Ala	Ala	Pro 210
Val	Val	Arg	Arg	Val 215	Lys	Val	Thr	Val	Asn 220	Tyr	Pro	Pro	Tyr	Ile 225
Ser	Glu	Ala	Lys	Gly 230	Thr	Gly	Val	Pro	Val 235	Gly	Gln	Lys	Gly	Thr 240
Leu	Gln	Cys	Glu	Ala 245	Ser	Ala	Val	Pro	Ser 250	Ala	Glu	Phe	Gln	Trp 255
Tyr	Lys	Asp	Asp	Lys 260	Arg	Leu	Ile	Glu	Gly 265	Lys	Lys	Gly	Val	Lys 270
Val	Glu	Asn	Arg	Pro 275	Phe	Leu	Ser	Lys	Leu 280	Ile	Phe	Phe	Asn	Val 285

Ser Glu His Asp Tyr Gly Asn Tyr Thr Cys Val Ala Ser Asn Lys 290 295 300

Leu Gly His Thr Asn Ala Ser Ile Met Leu Phe Gly Pro Gly Ala 305 310

Val Ser Glu Val Ser Asn Gly Thr Ser Arg Arg Ala Gly Cys Val 320 325 330

Trp Leu Leu Pro Leu Leu Val Leu His Leu Leu Leu Lys Phe 335

<400> 105

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<210> 105

<211> 1734

<212> DNA

<213> Homo Sapien

<210> 106

<211> 440

<212> PRT

<213> Homo Sapien

<400> 106

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Thr Gly Thr Asn Ile Gly Glu Ala Leu Gly His Gly Leu Gly Asp

Ala Leu Ser Glu Gly Val Gly Lys Ala Ile Gly Lys Glu Ala Gly 50 55 60

Gly Ala Ala Gly Ser Lys Val Ser Glu Ala Leu Gly Gln Gly Thr
65 70 75

Arg Glu Ala Val Gly Thr Gly Val Arg Gln Val Pro Gly Phe Gly 80 85 90

Ala Ala Asp Ala Leu Gly Asn Arg Val Gly Glu Ala Ala His Ala 95 100 105

Leu Gly Asn Thr Gly His Glu Ile Gly Arg Gln Ala Glu Asp Val

				110					115					120
Ile	Arg	His	Gly	Ala 125	Asp	Ala	Val	Arg	Gly 130	Ser	Trp	Gln	Gly	Val 135
Pro	Gly	His	Ser	Gly 140	Ala	Trp	Glu	Thr	Ser 145	Gly	Gly	His	Gly	11e 150
Phe	Gly	Ser	Gln	Gly 155	Gly	Leu	Gly	Gly	Gln 1.60	Gly	Gln	Gly	Asn	Pro 165
Gly	Gly	Leu	Gly	Thr 170	Pro	Trp	Val	His	Gly 175	Tyr	Pro	Gly	Asn	Ser 180
Ala	Gly	Ser	Phe	Gly 185	Met	Asn	Pro	Gln	Gly 190	Ala	Pro	Trp	Gly	Gln 195
Gly	Gly	Asn	Gly	Gly 200	Pro	Pro	Asn	Phe	Gly 205	Thr	Asn	Thr	Gln	Gly 210
Ala	Val	Ala	Gln	Pro 215	Gly	Tyr	Gly	Ser	Val 220	Arg	Ala	Ser	Asn	Gln 225
Asn	Glu	Gly	Cys	Thr 230	Asn	Pro	Pro	Pro	Ser 235	Gly	Ser	Gly	Gly	Gly 240
Ser	Ser	Asn	Ser	Gly 245	Gly	Gly	Ser	Gly	Ser 250	Gln	Ser	Gly	Ser	Ser 255
Gly	Ser	Gly	Ser	Asn 260	Gly	Asp	Asn	Asn	Asn 265	Gly	Ser	Ser	Ser	Gly 270
Gly	Ser	Ser	Ser	Gly 275	Ser	Ser	Ser	Gly	Ser 280	Ser	Ser	Gly	Gly	Ser 285
Ser	Gly	Gly	Ser	Ser 290	Gly	Gly	Ser	Ser	Gly 295	Asn	Ser	Gly	Gly	Ser 300
Arg	Gly	Asp	Ser	Gly 305	Ser	Glu	Ser	Ser	Trp 310	Gly	Ser	Ser	Thr	Gly 315
Ser	Ser	Ser	Gly	Asn 320	His	Gly	Gly	Ser	Gly 325	Gly	Gly	Asn	Gly	His 330
Lys	Pro	Gly	Cys	Glu 335	Lys	Pro	Gly	Asn	Glu 340	Ala	Arg	Gly	Ser	Gly 345
Glu	Ser	Gly	Ile	Gln 350	Gly	Phe	Arg	Gly	Gln 355	Gly	Val	Ser	Ser	Asn 360
Met	Arg	Glu	Ile	Ser 365	Lys	Glu	Gly	Asn	Arg 370	Leu	Leu	Gly	Gly	Ser 375
Gly	Asp	Asn	Tyr	Arg 380	Gly	Gln	Gly	Ser	Ser 385	Trp	Gly	Ser	Gly	Gly 390
Gly	Asp	Ala	Val	Gly 395	Gly	Val	Asn	Thr	Val 400	Asn	Ser	Glu	Thr	Ser 405

Pro Gly Met Phe Asn Phe Asp Thr Phe Trp Lys Asn Phe Lys Ser 410 415 420

Lys Leu Gly Phe Ile Asn Trp Asp Ala Ile Asn Lys Asp Gln Arg
425 430 435

Ser Ser Arg Ile Pro 440

<210> 107

<211> 918

<212> DNA

<213> Homo Sapien

<400> 107

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<210> 108

<211> 251

<212> PRT

<213> Homo Sapien

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                                       25
                                                            30
Phe Glu His Thr Tyr Phe Gly Pro Phe Asp Leu Arg Ala Met Lys
                  35
Leu Pro Ser Ile Ser Cys Pro His Glu Cys Phe Glu Ala Ile Leu
                  50
                                       55
                                                            60
Ser Leu Asp Thr Gly Tyr Arg Ala Pro Val Thr Leu Val Arg Lys
                                       70
                                                            75
Gly Cys Trp Thr Gly Pro Pro Ala Gly Gln Thr Gln Ser Asn Pro
                  80
                                       85
                                                            90
Asp Ala Leu Pro Pro Asp Tyr Ser Val Val Arg Gly Cys Thr Thr
                  95
                                      100
                                                          105
Asp Lys Cys Asn Ala His Leu Met Thr His Asp Ala Leu Pro Asn
                 110
                                      115
                                                          120
Leu Ser Gln Ala Pro Asp Pro Pro Thr Leu Ser Gly Ala Glu Cys
                 125
                                      130
                                                          135
Tyr Ala Cys Ile Gly Val His Gln Asp Asp Cys Ala Ile Gly Arg
                 140
                                                          150
Ser Arg Arg Val Gln Cys His Gln Asp Gln Thr Ala Cys Phe Gln
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                                      160
                                                          165
Gly Ser Gly Arg Met Thr Val Gly Asn Phe Ser Val Pro Val Tyr
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                                      175
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Ile Arg Thr Cys His Arg Pro Ser Cys Thr Thr Glu Gly Thr Thr
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                                                          195
Ser Pro Trp Thr Ala Ile Asp Leu Gln Gly Ser Cys Cys Glu Gly
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                                      205
                                                          210
Tyr Leu Cys Asn Arg Lys Ser Met Thr Gln Pro Phe Thr Ser Ala
                                                          225
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                                      220
Ser Ala Thr Thr Pro Pro Arg Ala Leu Gln Val Leu Ala Leu Leu
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Leu Pro Val Leu Leu Val Gly Leu Ser Ala
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<210> 109

<211> 1813

<212> DNA

<213> Homo Sapien

<400> 109

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<210> 110

<211> 390

<212> PRT

<213> Homo Sapien

<400> 110

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20 25 30

Leu Gln Leu His Leu Pro Ala Asn Arg Leu Gln Ala Val Glu Gly
35 40 45

Gly Glu Val Val Leu Pro Ala Trp Tyr Thr Leu His Gly Glu Val
50 55 60

Ser Ser Ser Gln Pro Trp Glu Val Pro Phe Val Met Trp Phe Phe 65 70 75

Lys Gln Lys Glu Lys Glu Asp Gln Val Leu Ser Tyr Ile Asn Gly 80 85 90

Val Thr Thr Ser Lys Pro Gly Val Ser Leu Val Tyr Ser Met Pro 95 100 105

Ser Arg Asn Leu Ser Leu Arg Leu Glu Gly Leu Gln Glu Lys Asp 110 115 120

Ser Gly Pro Tyr Ser Cys Ser Val Asn Val Gln Asp Lys Gln Gly
125 130 135

Lys Ser Arg Gly His Ser Ile Lys Thr Leu Glu Leu Asn Val Leu 140 140 150

Val Pro Pro Ala Pro Pro Ser Cys Arg Leu Gln Gly Val Pro His
155 160 165

Val Gly Ala Asn Val Thr Leu Ser Cys Gln Ser Pro Arg Ser Lys
170 175 180

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Pro Ala Val Gln Tyr Gln Trp Asp Arg Gln Leu Pro Ser Phe Gln
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                                     190
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Thr Phe Phe Ala Pro Ala Leu Asp Val Ile Arg Gly Ser Leu Ser
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                                      205
                                                          210
Leu Thr Asn Leu Ser Ser Ser Met Ala Gly Val Tyr Val Cys Lys
                 215
                                     220
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Ala His Asn Glu Val Gly Thr Ala Gln Cys Asn Val Thr Leu Glu
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Val Ser Thr Gly Pro Gly Ala Ala Val Val Ala Gly Ala Val Val
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Gly Thr Leu Val Gly Leu Gly Leu Leu Ala Gly Leu Val Leu Leu
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Tyr His Arg Arg Gly Lys Ala Leu Glu Glu Pro Ala Asn Asp Ile
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Lys Glu Asp Ala Ile Ala Pro Arg Thr Leu Pro Trp Pro Lys Ser
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                                     295
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Ser Asp Thr Ile Ser Lys Asn Gly Thr Leu Ser Ser Val Thr Ser
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Leu Thr Pro Thr Pro Ser Leu Ser Ser Gln Ala Leu Pro Ser Pro
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Arg Leu Pro Thr Thr Asp Gly Ala His Pro Gln Pro Ile Ser Pro
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Ile Pro Gly Gly Val Ser Ser Ser Gly Leu Ser Arg Met Gly Ala
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<210> 111

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 111

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<210> 112

<211> 24

<212> DNA

<213> Artificial Sequence

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<223> Synthetic oligonucleotide probe
<400> 112
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<211> 50
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
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<210> 114
<211> 2479
<212> DNA
<213> Homo Sapien
<400> 114
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 gctggagttc tggacttcaa cagaacccca tccagtcatt ttgattttgc 200
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<210> 115

<211> 660

<212> PRT

<213> Homo Sapien

<400> 115

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Leu Lys Ser Trp Leu Ile Ile Ser Leu Gly Leu Tyr Ser Gln Val 20 25 30

Ser Lys Leu Leu Ala Cys Pro Ser Val Cys Arg Cys Asp Arg Asn 35 40 45

Phe Val Tyr Cys Asn Glu Arg Ser Leu Thr Ser Val Pro Leu Gly
50 55 60

Ile Pro Glu Gly Val Thr Val Leu Tyr Leu His Asn Asn Gln Ile
65 70 75

Asn Asn Ala Gly Phe Pro Ala Glu Leu His Asn Val Gln Ser Val
80 85 90

His Thr Val Tyr Leu Tyr Gly Asn Gln Leu Asp Glu Phe Pro Met 95 100 105

Asn Leu Pro Lys Asn Val Arg Val Leu His Leu Gln Glu Asn Asn 110 115 120

Ile Gln Thr Ile Ser Arg Ala Ala Leu Ala Gln Leu Leu Lys Leu 125 130 135

Glu Glu Leu His Leu Asp Asp Asn Ser Ile Ser Thr Val Gly Val
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Glu Asp Gly Ala Phe Arg Glu Ala Ile Ser Leu Lys Leu Leu Phe 155 160 165

Leu Ser Lys Asn His Leu Ser Ser Val Pro Val Gly Leu Pro Val
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Asp Leu Gln Glu Leu Arg Val Asp Glu Asn Arg Ile Ala Val Ile 185 190 195

Ser Asp Met Ala Phe Gln Asn Leu Thr Ser Leu Glu Arg Leu Ile 200 205 210

Val Asp Gly Asn Leu Leu Thr Asn Lys Gly Ile Ala Glu Gly Thr 215 220 225

Phe Ser His Leu Thr Lys Leu Lys Glu Phe Ser Ile Val Arg Asn

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Arg	Leu	Tyr	Leu	Gln 260	Asp	Asn	Gln	Ile	Asn 265	His	Ile	Pro	Leu	Thr 270
Ala	Phe	Ser	Asn	Leu 275	Arg	Lys	Leu	Glu	Arg 280	Leu	Asp	Ile	Ser	Asn 285
Asn	Gln	Leu	Arg	Met 290	Leu	Thr	Gln	Gly	Val 295	Phe	Asp	Asn	Leu	Ser 300
Asn	Leu	Lys	Gln	Leu 305	Thr	Ala	Arg	Asn	Asn 310	Pro	Trp	Phe	Cys	Asp 315
Cys	Ser	Ile	Lys	Trp 320	Val	Thr	Glu	Trp	Leu 325	Lys	Tyr	Ile	Pro	Ser 330
Ser	Leu	Asn	Val	Arg 335	Gly	Phe	Met	Cys	Gln 340	Gly	Pro	Glu	Gln	Val 345
Arg	Gly	Met	Ala	Val 350	Arg	Glu	Leu	Asn	Met 355	Asn	Leu	Leu	Ser	Cys 360
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Thr	Ala	Ser	Pro	Thr 380	Thr	Gln	Pro	Pro	Thr 385	Leu	Ser	Ile	Pro	Asn 390
Pro	Ser	Arg	Ser	Tyr 395	Thr	Pro	Pro	Thr	Pro 400	Thr	Thr	Ser	Lys	Leu 405
Pro	Thr	Ile	Pro	Asp 410	Trp	Asp	Gly	Arg	Glu 415	Arg	Val	Thr	Pro	Pro 420
Ile	Ser	Glu	Arg	Ile 425	Gln	Leu	Ser	Ile	His 430	Phe	Val	Asn	Asp	Thr 435
Ser	Ile	Gln	Val	Ser 440	Trp	Leu	Ser	Leu	Phe 445	Thr	Val	Met	Ala	Tyr 450
Lys	Leu	Thr	Trp	Val 455	Lys	Met	Gly	His	Ser 460	Leu	Val	Gly	Gly	11e 465
Val	Gln	Glu	Arg	Ile 470	Val	Ser	Gly	Glu	Lys 475	Gln	His	Leu	Ser	Leu 480
Val	Asn	Leu	Glu	Pro 485	Arg	Ser	Thr	Tyr	Arg 490	Ile	Cys	Leu	Val	Pro 495
Leu	Asp	Ala	Phe	Asn 500	Tyr	Arg	Ala	Val	Glu 505	Asp	Thr	Ile	Cys	Ser 510
Glu	Ala	Thr	Thr	His 515	Ala	Ser	Tyr	Leu	Asn 520	Asn	Gly	Ser	Asn	Thr 525

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                                                           555
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Val Lys Gln Pro Val Arg Ser His Leu Arg Val Lys Arg Gly Trp
35 40 45

Val Trp Asn Gln Phe Phe Val Pro Glu Glu Met Asn Thr Thr Ser 50 55 60

His His Ile Gly Gln, Leu Arg Ser Asp Leu Asp Asn Gly Asn Asn 65 70 75

Ser Phe Gln Tyr Lys Leu Leu Gly Ala Gly Ala Gly Ser Thr Phe 80 85 90

Ile Ile Asp Glu Arg Thr Gly Asp Ile Tyr Ala Ile Gln Lys Leu
95 100 105

Asp Arg Glu Glu Arg Ser Leu Tyr Ile Leu Arg Ala Gln Val Ile 110 115 120

Asp Ile Ala Thr Gly Arg Ala Val Glu Pro Glu Ser Glu Phe Val 125 130 135

Ile Lys Val Ser Asp Ile Asn Asp Asn Glu Pro Lys Phe Leu Asp 140 145 150

Glu Pro Tyr Glu Ala Ile Val Pro Glu Met Ser Pro Glu Gly Thr
155 160 165

Leu Val Ile Gln Val Thr Ala Ser Asp Ala Asp Asp Pro Ser Ser

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Tyr	Phe	Ser	Val	Glu 200	Pro	Thr	Thr	Gly	Val 205	Ile	Arg	Ile	Ser	Ser 210
Lys	Met	Asp	Arg	Glu 215	Leu	Gln	Asp	Glu	Tyr 220	Trp	Val	Ile	Ile	Gln 225
Ala	Lys	Asp	Met	Ile 230	Gly	Gln	Pro	Gly	Ala 235	Leu	Ser	Gly	Thr	Thr 240
Ser	Val	Leu	Ile	Lys 245	Leu	Ser	Asp	Val	Asn 250	Asp	Asn	Lys	Pro	Ile 255
Phe	Lys	Glu	Ser	Leu 260	Tyr	Arg	Leu	Thr	Val 265	Ser	Glu	Ser	Ala	Pro 270
Thr	Gly	Thr	Ser	Ile 275	Gly	Thr	Ile	Met	Ala 280	Tyr	Asp	Asn	Asp	Ile 285
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Gln	Thr	Phe	Asp	Ile 305	Ile	Thr	Asn	His	Glu 310	Thr	Gln	Glu	Gly	Ile 315
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Gly	Ile	Arg	Ala	Lys 335	Val	Lys	Asn	His	His 340	Val	Pro	Glu	Gln	Leu 345
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Tyr	Asn	Leu	Ser	Ile 440	Thr	Ala	Thr	Glu	Lys 445	Tyr	Asn	Ile	Glu	Gln 450
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Cys	Asp	Cys	Gly	Asp 575	Ser	Gly	Ser	Thr	Gln 580	Thr	Cys	Gln	Tyr	Gln 585
Glu	Leu	Val	Leu	Ser 590	Met	Gly	Phe	Lys	Thr 595	Glu	Val	Ile	Ile	Ala 600
Ile	Leu	Ile	Cys	Ile 605	Met	Ile	Ile	Phe	Gly 610	Phe	Ile	Phe	Leu	Thr 615
Leu	Gly	Leu	Lys	Gln 620	Arg	Arg	Lys	Gln	Ile 625	Leu	Phe	Pro	Glu	Lys 630
Ser	Glu	Asp	Phe	Arg 635	Glu	Asn	Ile	Phe	Gln 640	Tyr	Asp	Asp	Glu	Gly 645
Gly	Gly	Glu	Glu	Asp 650	Thr	Glu	Ala	Phe	Asp 655	Ile	Ala	Glu	Leu	Arg 660
Ser	Ser	Thr	Ile	Met 665	Arg	Glu	Arg	Lys	Thr 670	Arg	Lys	Thr	Thr	Ser 675
Ala	Glu	Ile	Arg	Ser 680	Leu	Tyr	Arg	Gln	Ser 685	Leu	Gln	Val	Gly	Pro 690
qaA	Ser	Ala	Ile	Phe 695	Arg	Lys	Phe	Ile	Leu 700	Glu	Lys	Leu	Glu	Glu 705
Ala	Asn	Thr	Asp	Pro 710	Cys	Ala	Pro	Pro	Phe 715	Asp	Ser	Leu	Gln	Thr 720
Tyr	Ala	Phe	Glu	Gly 725	Thr	Gly	Ser	Leu	Ala 730	Gly	Ser	Leu	Ser	Ser 735
Leu	Glu	Ser	Ala	Val 740	Ser	Asp	Gln	Asp	Glu 745	Ser	Tyr	Asp	Tyr	Leu 750
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- Asn Phe Gln Gln Pro Tyr Ile Thr Asn Arg Thr Phe Met Leu Ala 50 55 60
- Lys Glu Ala Ser Leu Ala Asp Asn Asn Thr Asp Val Arg Leu Ile
 65 70 75
- Gly Glu Lys Leu Phe His Gly Val Ser Met Ser Glu Arg Cys Tyr

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Lys	Pro	Gly	Asp	Gln 35	Ile	Leu	Asp	Trp	Gln 40	Tyr	Gly	Val	Thr	Gln 45
Ala	Phe	Pro	His	Thr 50	Glu	Glu	Glu	Val	Glu 55	Val	Asp	Ser	His	Ala 60
Tyr	Ser	His	Arg	Trp 65	Lys	Arg	Asn	Leu	Asp 70	Phe	Leu	Lys	Ala	Val 75
Asp	Thr	Asn	Arg	Ala 80	Ser	Val	Gly	Gln	Asp 85	Ser	Pro	Glu	Pro	Arg 90
Ser	Phe	Thr	Asp	Leu 95	Leu	Leu	Asp	Asp	Gly 100	Gln	Asp	Asn	Asn	Thr 105
Gln	Ile	Glu	Glu	Asp 110	Thr	Asp	His	Asn	Tyr 115	Tyr	Ile	Ser	Arg	Ile 120
Tyr	Gly	Pro	Ser	Asp 125	Ser	Ala	Ser	Arg	Asp 130	Leu	Trp	Val	Asn	Ile 135
Asp	Gln	Met	Glu	Lys 140	Asp	Lys	Val	Lys	Ile 145	His	Gly	Ile	Leu	Ser 150
Asn	Thr	His	Arg	Gln 155	Ala	Ala	Arg	Val	Asn 160	Leu	Ser	Phe	Asp	Phe 165
Pro	Phe	Tyr	Gly	His 170	Phe	Leu	Arg	Glu	Ile 175	Thr	Val	Ala	Thr	Gly 180
Gly	Phe	Ile	Tyr	Thr 185	Gly	Glu	Val	Val	His 190	Arg	Met	Leu	Thr	Ala 195

Thr	Gln	Tyr	Ile	Ala 200	Pro	Leu	Met	Ala	Asn 205	Phe	Asp	Pro	Ser	Val 210
Ser	Arg	Asn	Ser	Thr 215	Val	Arg	Tyr	Phe	Asp 220	Asn	Gly	Thr	Ala	Leu 225
Val	Val	Gln	Trp	Asp 230	His	Val	His	Leu	Gln 235	Asp	Asn	Tyr	Asn	Leu 240
Gly	Ser	Phe	Thr	Phe 245	Gl.n	Ala	Thr	Leu	Leu 250	Met	Asp	Gl.y	Arg	Ile 255
Ile	Phe	Gly	Tyr	Lys 260	Glu	Ile	Pro	Val	Leu 265	Val	Thr	Gln	Ile	Ser 270
Ser	Thr	Asn	His	Pro 275	Val	Lys	Val	Gly	Leu 280	Ser	Asp	Ala	Phe	Val 285
Val	Val	His	Arg	Ile 290	Gln	Gln	Ile	Pro	Asn 295	Val	Arg	Arg	Arg	Thr 300
Ile	Tyr	Glu	Tyr	His 305	Arg	Val	Glu		Gln 310	Met	Ser	Lys	Ile	Thr 315
Asn	Ile	Ser	Ala	Val 320	Glu	Met	Thr	Pro	Leu 325	Pro	Thr	Cys	Leu	Gln 330
Phe	Asn	Arg	Cys	Gly 335	Pro	Cys	Val	Ser	Ser 340	Gln	Ile	Gly	Phe	Asn 345
Cys	Ser	Trp	Cys	Ser 350	Lys	Leu	Gln	Arg	Cys 355	Ser	Ser	Gly	Phe	Asp 360
Arg	His	Arg	Gln	Asp 365	Trp	Val	Asp	Ser	Gly 370	Cys	Pro	Glu	Glu	Ser 375
Lys	Glu	Lys	Met	Cys 380	Glu	Asn	Thr	Glu	Pro 385	Val	Glu	Thr	Ser	Ser 390
Arg	Thr	Thr	Thr	Thr 395	Val	Gly	Ala	Thr	Thr 400	Thr	Gln	Phe	Arg	Val 405
Leu	Thr	Thr	Thr	Arg 410	Arg	Ala	Val	Thr	Ser 415	Gln	Phe	Pro	Thr	Ser 420
Leu	Pro	Thr	Glu	Asp 425	Asp	Thr	Lys	Ile	Ala 430	Leu	His	Leu	Lys	Asp 435
Asn	Gly	Ala	Ser	Thr 440	Asp	Asp	Ser	Ala	Ala 445	Glu	Lys	Lys	Gly	Gly 450
Thr	Leu	His	Ala	Gly 455	Leu	Ile	Ile	Gly	Ile 460	Leu	Ile	Leu	Val	Leu 465
Ile	Val	Ala	Thr	Ala 470	Ile	Leu	Val	Thr	Val 475	Tyr	Met	Tyr	His	His 480
Pro	Thr	Ser	Ala	Ala	Ser	Ile	Phe	Phe	Ile	Glu	Arg	Arg	Pro	Ser

485 490 495

Arg Trp Pro Ala Met Lys Phe Arg Arg Gly Ser Gly His Pro Ala 500 505 510

Tyr Ala Glu Val Glu Pro Val Gly Glu Lys Glu Gly Phe Ile Val 515 520 525

Ser Glu Gln Cys

- <210> 129
- <211> 4834
- <212> DNA
- <213> Homo Sapien
- <220>
- <221> unsure
- <222> 3784
- <223> unknown base
- <400> 129

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<210> 130

<211> 354

<212> PRT

<213> Homo Sapien

<400> 130

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Trp Leu Ala Ala Val Leu Leu Ser Leu Cys Cys Leu Leu Pro Ser 20 25 30

Cys Leu Pro Ala Gly Gln Ser Val Asp Phe Pro Trp Ala Ala Val

Asp Asn Met Met Val Arg Lys Gly Asp Thr Ala Val Leu Arg Cys

				50					55					60
Tyr	Leu	Glu	Asp	Gly 65	Ala	Ser	Lys	Gly	Ala 70	Trp	Leu	Asn	Arg	Ser 75
Ser	Ile	Ile	Phe	Ala .80	Gly	Gly	Asp	Lys	Trp 85	Ser	Val	Asp	Pro	Arg 90
Val	Ser	Ile	Ser	Thr 95	Leu	Asn	Lys	Arg	Asp 100	Tyr	Ser	Leu	Gln	Ile 105
Gln	Asn	Val	Asp	Val 110	Thr	Asp	Asp	Gly	Pro 115	Tyr	Thr	Cys	Ser	Val 120
Gln	Thr	Gln	His	Thr 125	Pro	Arg	Thr	Met	Gln 130	Val	His	Leu	Thr	Val 135
Gln	Val	Pro	Pro	Lys 140	Ile	Tyr	Asp	Ile	Ser 145	Asn	Asp	Met	Thr	Val 150
Asn	Glu	Gly	Thr	Asn 155	Val	Thr	Leu	Thr	Cys 160	Leu	Ala	Thr	Gly	Lys 165
Pro	Glu	Pro	Ser	Ile 170	Ser	Trp	Arg	His	Ile 175	Ser	Pro	Ser	Ala	Lys 180
Pro	Phe	Glu	Asn	Gly 185	Gln	Tyr	Leu	Asp	Ile 190	Tyr	Gly	Ile	Thr	Arg 195
Asp	Gln	Ala	Gly	Glu 200	Tyr	Glu	Cys	Ser	Ala 205	Glu	Asn	Asp	Val	Ser 210
Phe	Pro	Asp	Val	Arg 215	Lys	Val	Lys	Val	Val 220	Val	Asn	Phe	Ala	Pro 225
Thr	Ile	Gln	Glu	Ile 230	Lys	Ser	Gly	Thr	Val 235	Thr	Pro	Gly	Arg	Ser 240
Gly	Leu	Ile	Arg	Cys 245	Glu	Gly	Ala	Gly	Val 250	Pro	Pro	Pro	Ala	Phe 255
Glu	Trp	Tyr	Lys	Gly 260	Glu	Lys	Lys	Leu	Phe 265	Asn	Gly	Gln	Gln	Gly 270
Ile	Ile	Ile	Gln	Asn 275	Phe	Ser	Thr	Arg	Ser 280	Ile	Leu	Thr	Val	Thr 285
Asn	Val	Thr	Gln	Glu 290	His	Phe	Gly	Asn	Tyr 295	Thr	Cys	Val	Ala	Ala 300
Asn	Lys	Leu	Gly	Thr 305	Thr	Asn	Ala	Ser	Leu 310	Pro	Leu	Asn	Pro	Pro 315
Ser	Thr	Ala	Gln	Tyr 320	Gly	Ile	Thr	Gly	Ser 325	Ala	Asp	Val	Leu	Phe 330
Ser	Cys	Trp	Tyr	Leu 335	Val	Leu	Thr	Leu	Ser 340	Ser	Phe	Thr	Ser	Ile 345

Phe Tyr Leu Lys Asn Ala Ile Leu Gln 350

<210> 131

<211> 823

<212> DNA

<213> Homo Sapien

<400> 131

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<210> 132

<211> 155

<212> PRT

<213> Homo Sapien

<400> 132

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Pro Ser Ser Lys Glu Glu Thr Gln Val Pro Lys Thr Leu Ile Ser 20 25 30

Gly Leu Pro Gly Arg Lys Ser Ser Ser Arg Val Gly Glu Lys Leu
35 40 45

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Gln Ser Ala His Lys Met Pro Leu Ser Pro Gly Leu Leu Leu
                  50
                                       55
                                                            60
 Leu Leu Ser Gly Ala Thr Ala Thr Ala Ala Leu Pro Leu Glu Gly
                   65
                                       70
                                                            75
 Gly Pro Thr Gly Arg Asp Ser Glu His Met Gln Glu Ala Ala Gly
                   80
                                       85
                                                            90
 Ile Arg Lys Ser Ser Leu Leu Thr Phe Leu Ala Trp Trp Phe Glu
                  95
                                      100
                                                           105
 Trp Thr Ser Gln Ala Ser Ala Gly Pro Leu Ile Gly Glu Glu Ala
                 110
                                      115
                                                           120
 Arg Glu Val Ala Arg Arg Gln Glu Gly Ala Pro Pro Gln Gln Ser
                 125
                                      130
                                                           135
 Ala Arg Arg Asp Arg Met Pro Cys Arg Asn Phe Phe Trp Lys Thr
                 140
                                      145
                                                           150
 Phe Ser Ser Cys Lys
                 155
<210> 133
<211> 24
<212> DNA
<213> Artificial Sequence
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<223> Synthetic oligonucleotide probe
<400> 133
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<210> 134
<211> 28
<212> DNA
<213> Artificial Sequence
<220>
<223> Synthetic oligonucleotide probe
<400> 134
gcaggaggag aaggtcttcc agaagaag 28
<210> 135
<211> 45
<212> DNA
<213> Artificial Sequence
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<223> Synthetic oligonucleotide probe
<400> 135
agaagttcca gtcagcccac aagatgccat tgtcccccgg cctcc 45
<210> 136
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<211> 1875

<212> DNA

<213> Homo Sapien

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<210> 137

<211> 325

<212> PRT

<213> Homo Sapien

<400> 137

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Ser Ala Leu Gly Met Val Pro Pro Pro Glu Asn Val Arg Met Asn 20 25 30

Ser Val Asn Phe Lys Asn Ile Leu Gln Trp Glu Ser Pro Ala Phe 35 40 45

Ala Lys Gly Asn Leu Thr Phe Thr Ala Gln Tyr Leu Ser Tyr Arg
50 55 60

Ile Phe Gln Asp Lys Cys Met Asn Thr Thr Leu Thr Glu Cys Asp
65 70 75

Phe Ser Ser Leu Ser Lys Tyr Gly Asp His Thr Leu Arg Val Arg
80 85 90

Ala Glu Phe Ala Asp Glu His Ser Asp Trp Val Asn Ile Thr Phe 95 100 105

Cys Pro Val Asp Asp Thr Ile Ile Gly Pro Pro Gly Met Gln Val

Glu Val Leu Ala Asp Ser Leu His Met Arg Phe Leu Ala Pro Lys 125 130 135

Ile Glu Asn Glu Tyr Glu Thr Trp Thr Met Lys Asn Val Tyr Asn 140 145 150

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Ser Trp Thr Tyr Asn Val Gln Tyr Trp Lys Asn Gly Thr Asp Glu
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                                     160
                                                          165
Lys Phe Gln Ile Thr Pro Gln Tyr Asp Phe Glu Val Leu Arg Asn
                 170
                                      175
                                                          180
Leu Glu Pro Trp Thr Thr Tyr Cys Val Gln Val Arg Gly Phe Leu
                185
                                     190
                                                          195
Pro Asp Arg Asn Lys Ala Gly Glu Trp Ser Glu Pro Val Cys Glu
                 200
                                     205
                                                          210
Gln Thr Thr His Asp Glu Thr Val Pro Ser Trp Met Val Ala Val
                 215
                                      220
                                                          225
Ile Leu Met Ala Ser Val Phe Met Val Cys Leu Ala Leu Leu Gly
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                                     235
                                                          240
Cys Phe Ser Leu Leu Trp Cys Val Tyr Lys Lys Thr Lys Tyr Ala
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                                                          255
Phe Ser Pro Arg Asn Ser Leu Pro Gln His Leu Lys Glu Phe Leu
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                                                          270
Gly His Pro His His Asn Thr Leu Leu Phe Phe Ser Phe Pro Leu
                 275
                                     280
                                                          285
Ser Asp Glu Asn Asp Val Phe Asp Lys Leu Ser Val Ile Ala Glu
                290
                                     295
                                                          300
Asp Ser Glu Ser Gly Lys Gln Asn Pro Gly Asp Ser Cys Ser Leu
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Gly Thr Pro Pro Gly Gln Gly Pro Gln Ser
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- <210> 138
- <211> 2570
- <212> DNA
- <213> Homo Sapien
- <400> 138
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 tggggetggg attggggget etgetgtgge eeattttete eageageaet 200
 ttggaceteg ggtgeagate gaegtgtaeg agaagggaae egtgggtgge 250
 egettggeea eeateteagt eaacaageag eactatgaga geggggetge 300
 eteetteeae teeetgagee tgeacatgea ggaettegte aagetgetgg 350
 ggetgaggea eeggeggag gtggtgggea ggagegeeat etteggeggg 400

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35 40 45

Gln Gln His Phe Gly Pro Arg Val Gln Ile Asp Val Tyr Glu Lys
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Gly Thr Val Gly Gly Arg Leu Ala Thr Ile Ser Val Asn Lys Gln 65 70 75

His Tyr Glu Ser Gly Ala Ala Ser Phe His Ser Leu Ser Leu His
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Met Gln Asp Phe Val Lys Leu Leu Gly Leu Arg His Arg Arg Glu 95 100 105

Val Val Gly Arg Ser Ala Ile Phe Gly Gly Glu His Phe Met Leu

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Tyr	Ala	Phe	Ser	Gly 170	Val	Glu	Glu	Leu	Leu 175	Tyr	Ser	Leu	Gly	Glu 180
Ser	Thr	Phe	Val	Asn 185	Met	Thr	Gln	His	Ser 190	Val	Ala	Glu	Ser	Leu 195
Leu	Gln	Val	Gly	Val 200	Thr	Gln	Arg	Phe	Ile 205	Asp	Asp	Val	Val	Ser 210
Ala	Val	Leu	Arg	Ala 215	Ser	Tyr	Gly	Gln	Ser 220	Ala	Ala	Met	Pro	Ala 225
Phe	Ala	Gly	Ala	Met 230	Ser	Leu	Ala	Gly	Ala 235	Gln	Gly	Ser	Leu	Trp 240
Ser	Val	Glu	Gly	Gly 245	Asn	Lys	Leu	Val	Cys 250	Ser	Gly	Leu	Leu	Lys 255
Leu	Thr	Lys	Ala	Asn 260	Val	Ile	His	Ala	Thr 265	Val	Thr	Ser	Val	Thr 270
Leu	His	Ser	Thr	Glu 275	Gly	Lys	Ala	Leu	Tyr 280	Gln	Val	Ala	Tyr	Glu 285
Asn	Glu	Val	Gly	Asn 290	Ser	Ser	Asp	Phe	Tyr 295	Asp	Ile	Val	Val	Ile 300
Ala	Thr	Pro	Leu	His 305	Leu	Asp	Asn	Ser	Ser 310	Ser	Asn	Leu	Thr	Phe 315
Ala	Gly	Phe	His	Pro 320	Pro	Ile	Asp	Asp	Val 325	Gln	Gly	Ser	Phe	Gln 330
Pro	Thr	Val	Val	Ser 335	Leu	Val	His	Gly	Tyr 340	Leu	Asn	Ser	Ser	Tyr 345
Phe	Gly	Phe	Pro	Asp 350	Pro	Lys	Leu	Phe	Pro 355	Phe	Ala	Asn	Ile	Leu 360
Thr	Thr	Asp	Phe	Pro 365	Ser	Phe	Phe	Cys	Thr 370	Leu	Asp	Asn	Ile	Cys 375
Pro	Val	Asn	Ile	Ser 380	Ala	Ser	Phe	Arg	Arg 385	Lys	Gln	Pro	Gln	Glu 390
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                                                           435
 Arg Phe Ala Leu His Asp Gln Leu Phe Tyr Leu Asn Ala Leu Glu
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